

I Claim:

- 1 1. An apparatus for effecting symmetric driving of a write head; the apparatus
2 comprising:
3 (a) a first drive unit coupled with a first connection locus of said write head;
4 (b) a second drive unit coupled with a second connection locus of said write head;
5 and
6 (c) a control unit coupled with said first drive unit and said second drive unit;
7 said control unit effecting complementary coordination by said first and second drive
8 units to provide at least one drive signal in substantially equal magnitudes of opposite
9 polarities at each of said first and second connection loci during respective time
10 intervals of operation of said write head.
- 1 2. An apparatus for effecting symmetric driving of a write head as recited in Claim 1
2 wherein said first drive unit comprises at least one first current mirror structure and
3 said second drive unit comprises at least one second current mirror structure
4 substantially similarly with said at least one first current mirror structure, and wherein
5 said at least one drive signal includes a direct current write current signal.
- 1 3. An apparatus for effecting symmetric driving of a write head as recited in Claim 1
2 wherein said first drive unit comprises at least one first current mirror structure and
3 said second drive unit comprises at least one second current mirror structure
4 substantially similarly with said at least one first current mirror structure, and wherein
5 said at least one drive signal includes a write boost current signal.
- 1 4. An apparatus for effecting symmetric driving of a write head as recited in Claim 2
2 wherein said at least one drive signal includes a write boost current signal.
- 1 5. An apparatus for effecting symmetric driving of a write head as recited in Claim 1
2 wherein said respective time intervals of operation are intervals of a digital data
3 signal.

1 6. An apparatus for effecting symmetric driving of a write head as recited in Claim 2
2 wherein said respective time intervals of operation are intervals of a digital data
3 signal.

1 7. An apparatus for effecting symmetric driving of a write head as recited in Claim 3
2 wherein said respective time intervals of operation are intervals of a digital data
3 signal.

1 8. An apparatus for effecting symmetric driving of a write head as recited in Claim 4
2 wherein said respective time intervals of operation are intervals of a digital data
3 signal.

1 9. An apparatus for driving a write head in response to at least one data signal; the
2 apparatus comprising:
3 (a) a first drive unit coupled with said write head;
4 (b) a second drive unit coupled with said write head; and
5 (c) a control unit coupled with said first drive unit and said second drive unit;
6 said control unit receiving said at least one data signal and generating control signals
7 to said first drive unit and said second drive unit in response to said at least one data
8 signal; said control signals controlling said first drive unit to apply at least one first
9 drive signal to a first write head connection locus of said write head in a first signal
10 polarity and controlling said second drive unit to apply at least one second drive
11 signal to a second write head connection locus of said write head in a second signal
12 polarity opposite to said first signal polarity when said at least one data signal effects
13 a signal excursion; said at least one first drive signal and said at least one second drive
14 signal being substantially equal in magnitude; said at least one first drive signal and
15 said at least one second drive signal being applied substantially simultaneously.

1 10. An apparatus for driving a write head in response to at least one data signal as recited
2 in Claim 9 wherein said each of said first drive unit and said second drive unit are
3 substantially similar in construction and comprise: a first logic level current mirror
4 and a second logic level current mirror; each of said first and second logic level
5 current mirror being coupled to receive a logic level write drive component signal and
6 responding to said control signals to present a representative logic level write drive
7 signal related to said logic level write drive component signal to said write head in
8 one of said first signal polarity or said second signal polarity.

1 11. An apparatus for driving a write head in response to at least one data signal as recited
2 in Claim 9 wherein each of said first drive unit and said second drive unit are
3 substantially similar in construction and comprise: a first boost current mirror and a
4 and second boost current mirror; each of said first and second boost current mirror
5 being coupled to receive a boost current write drive component signal; each
6 respective boost current mirror of said first and second boost current mirror
7 responding to said control signals to present said boost current write drive component
8 signal to said write head in the same signal polarity of said first signal polarity or said
9 second signal polarity as said representative direct current write drive signal presented
10 by said respective current mirror.

1 12. An apparatus for driving a write head in response to at least one data signal as recited
2 in Claim 10 wherein each of said first drive unit and said second drive unit are
3 substantially similar in construction and comprise: a first boost current mirror and a
4 and second boost current mirror; each of said first and second boost current mirror
5 being coupled to receive a boost current write drive component signal; each
6 respective boost current mirror of said first and second boost current mirror
7 responding to said control signals to present said boost current write drive component
8 signal to said write head in the same signal polarity of said first signal polarity or said
9 second signal polarity as said representative direct current write drive signal presented
10 by said respective current mirror.

1 13. A method for driving a write head in response to at least one data signal; the method
2 comprising the steps of:

3 (a) in no particular order:

4 (1) providing a first drive unit coupled with said write head;

5 (2) providing a second drive unit coupled with said write head; and

6 (3) providing a control unit coupled with said first drive unit and said
7 second drive unit; and

8 (b) operating said control unit to receive said at least one data signal and generate
9 control signals to said first drive unit and said second drive unit in response to
10 said at least one data signal; said control signals controlling said first drive unit to
11 apply at least one first drive signal to a first write head connection locus of said
12 write head in a first signal polarity and controlling said second drive unit to apply
13 at least one second drive signal to a second write head connection locus of said
14 write head in a second signal polarity opposite to said first signal polarity when
15 said at least one data signal effects a signal excursion; said at least one first drive
16 signal and said at least one second drive signal being substantially equal in
17 magnitude; said at least one first drive signal and said at least one second drive
18 signal being applied substantially simultaneously.

1 14. A method for driving a write head in response to at least one data signal as recited in
2 Claim 13 wherein each of said first drive unit and said second drive unit are
3 substantially similar in construction and comprise: a first logic level current mirror
4 and a second logic level current mirror; each of said first and second logic level
5 current mirror being coupled to receive a logic level write drive component signal and
6 responding to said control signals to present a representative logic level write drive
7 signal related to said logic level write drive component signal to said write head in
8 one of said first signal polarity or said second signal polarity.

1 15. A method for driving a write head in response to at least one data signal as recited in
2 Claim 13 wherein each of said first drive unit and said second drive unit are
3 substantially similar in construction and comprise: a first boost current mirror and a
4 and second boost current mirror; each of said first and second boost current mirror
5 being coupled to receive a boost current write drive component signal; each
6 respective boost current mirror of said first and second boost current mirror
7 responding to said control signals to present said boost current write drive component
8 signal to said write head in the same signal polarity of said first signal polarity or said
9 second signal polarity as said representative direct current write drive signal presented
10 by said respective current mirror.

1 16. A method for driving a write head in response to at least one data signal as recited in
2 Claim 14 wherein each of said first drive unit and said second drive unit are
3 substantially similar in construction and comprise: a first boost current mirror and a
4 and second boost current mirror; each of said first and second boost current mirror
5 being coupled to receive a boost current write drive component signal; each
6 respective boost current mirror of said first and second boost current mirror
7 responding to said control signals to present said boost current write drive component
8 signal to said write head in the same signal polarity of said first signal polarity or said
9 second signal polarity as said representative direct current write drive signal presented
10 by said respective current mirror.